

1. A method for driving a large motor vehicle having a windshield behind which a driver sits and operates a steering wheel of the vehicle, comprising:

placing a pair of driver-visible lines on or adjacent to the windshield, located for a particular driver relative to the driver's head position while driving the vehicle, the lines being obliquely positioned relative to horizontal and converging toward one another at upper ends of the lines, including a left line and a right line, the left line being oriented to appear to the driver to be generally parallel to a left side lane line in a roadway where the vehicle is being driven in a straight path and wherein the path ahead of the vehicle is straight, and the right line being oriented to appear to be generally parallel to a right side lane line or right edge of the roadway on which the vehicle is being driven on a straight path,

driving the vehicle with the eyes of the driver focused and converged ahead at the roadway and not on the lines on the windshield, thereby producing in the peripheral vision of a two-eyed driver a double image of each of the left and right lines on the windshield, the double images comprising inner and outer left line images and inner and outer right line images and the inner left and right line images defining a conceptual zone of safety between them, and steering the vehicle so as to maintain the vehicle on a path wherein both the left side lane line and the right side lane line or roadway edge remain outside the zone of safety, whereby when such a line enters the zone of safety the driver takes this as a warning that corrective steering action is needed.



2. The method of claim 1, wherein the step of placing driver-visible lines comprises attaching adhesive-backed visible strips of flexible material directly onto the inside surface of the windshield.

3. The method of claim 1, wherein the step of placing driver-visible lines comprises forming light lines on or adjacent to a top surface of a dashboard of the vehicle, not directly visible to the user, and thereby reflecting the lines off the inside surface of the windshield toward the driver as reflected images of the light lines.

4. The method of claim 1, wherein the step of placing driver-visible lines includes locating the driver-visible lines in such a way that a selected minimum clearance distance of the vehicle from the left side lane line is maintained when the inner left line image appears to be parallel to and directly overlies the left side lane line, and such that a selected right side minimum clearance distance is maintained between the vehicle and the right side lane line or right edge of the roadway when the inner right line image appears to be parallel to and directly overlies the right side lane line or right edge of the roadway, thereby defining the conceptual zone of safety between the inner left and right line images when the driver's eyes are directed ahead at the roadway.

5. The method of claim 4, wherein for placement of the driver-visible lines the vehicle is placed near the left side lane line such that the vehicle is separated from the left side lane line by said selected minimum left side clearance, and including establishing the inner left line image to

overlie the left side lane line with the vehicle in such position, then repeating this step with the vehicle near the right side lane line or right edge of the roadway, with the vehicle at the selected minimum right side clearance distance from the right side lane line or right edge of the roadway.

6. The method of claim 4, wherein the step of locating the driver-visible lines is performed by closing or covering the right eye to locate the inner left line image, and by closing or covering the left eye to locate the inner right line image.

7. The method of claim 5, wherein the step of locating the driver-visible lines is performed by closing or covering the right eye to locate the inner left line image, and by closing or covering the left eye to locate the inner right line image.

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8. The method of claim 1, wherein the step of placing the driver-visible lines is performed by closing or covering the right eye to locate the inner left line image, and by closing or covering the left eye to locate the inner right line image.

9. A method for driving a large motor vehicle having a windshield behind which a driver sits and operates a steering wheel of the vehicle, comprising:

providing a light source near the vehicle windshield, in a position as not to be seen directly by the driver but such as to make a reflection of a pair of light lines on the windshield visible to the driver, the lines being straight or curved and converging toward one another at their upper ends as seen reflected on the windshield, the reflected left and right lines being located for

a particular driver relative to the driver's head position while driving the vehicle, the left line being oriented to appear to the driver to be generally parallel to a left side lane line in a roadway where the vehicle is being driven in a straight path and where the path ahead of the vehicle is straight, and the right line being oriented to be generally parallel to a right side lane line or right edge of the roadway on which the vehicle is being driven in a straight path, and including automatic means connected to the steering wheel of the vehicle and responsive to the rotational position of the steering wheel for adjusting the curvature of the left and right lines seen as reflections on the windshield in accordance with the steering wheel position such that the left and right lines are straight when the vehicle is being driven in a straight path, and such that the left and right lines are curved and represent the path that will be taken, as seen against the roadway ahead, by the vehicle if the driver proceeds ahead with the steering wheel continuing in the same position, and

driving the vehicle with the eyes of the driver focused and converged ahead at the roadway and not on the lines seen on the windshield, thereby producing in the peripheral vision of a two-eyed driver a double image of each of the left and right lines on the windshield, the double images comprising inner and outer left line images and inner and outer right line images and the inner left and right line images defining a conceptual zone of safety between them, and steering the vehicle so as to maintain the vehicle on a path wherein both the left side lane line and the right side lane line or roadway edge remain outside the zone of safety, including when traveling through turns or curves, whereby when such a lane line enters the zone of safety, as seen by the driver, the driver takes this as a warning that corrective steering action is needed.

10. The method of claim 9, wherein the light source comprises an LED array, and including a remote control device with means, enabling the driver to set the apparent positions of the left and right driver-visible lines as reflected from the windshield while the driver is in a normal driving position.

11. The method of claim 10, including the driver's setting the apparent positions of the inner left and right images by closing or covering the right eye to set the inner left image relative to the left side lane lines and closing or covering the left eye to set the inner right image relative to the right side lane or roadway edge.

12. The method of claim 9, including the driver's setting the apparent positions of the inner left and right images by closing or covering the right eye to set the inner left image relative to the left side lane lines and closing or covering the left eye to set the inner right image relative to the right side lane or roadway edge.

13. A system assisting a driver of a large motor vehicle having a windshield behind which the driver sits and operates a steering wheel of the vehicle, the system comprising:
a light source near the vehicle windshield, in a position as not to be seen directly by the driver but such as to make a reflection of a pair of light lines on the windshield visible to the driver, the lines being straight or curved and adjustable and converging toward one another at their upper ends as seen reflected on the windshield, the reflected left and right lines being located for a particular driver relative to the driver's head position while driving the vehicle, the

left line being oriented to appear to the driver to be generally parallel to a left side lane line in a roadway where the vehicle is being driven in a straight path and where the path ahead of the vehicle is straight, and the right line being oriented to appear to be generally parallel to a right side lane line or right edge of the roadway on which the vehicle is being driven in a straight path, and

automatic means connected to the steering wheel of the vehicle and responsive to the rotational position of the steering wheel for adjusting the curvature of the left and right lines seen as reflections on the windshield in accordance with the steering wheel position such that the left and right lines are straight when the vehicle is being driven in a straight path, and such that the left and right lines are curved and represent the path that will be taken, as seen against the roadway ahead, by the vehicle if the driver proceeds ahead with the steering wheel continuing in the same position,

whereby the driver drives the vehicle with the eyes of the driver focused and converged ahead at the roadway and not on the lines seen on the windshield, thereby producing in the peripheral vision of a two-eyed driver a double image of each of the left and right lines on the windshield, the double images comprising inner and outer left line images and inner and outer right line images and the inner left and right line images defining a conceptual zone of safety between them, and with the driver steering the vehicle so as to maintain the vehicle on a path wherein both the left side lane line and the right side lane line or roadway edge remain outside the zone of safety, including when traveling through turns or curves, whereby when such a lane line enters the zone of safety, as seen by the driver, the driver takes this as a warning that corrective steering action is needed.

14. The system of claim 13 wherein the light source comprises an LED array.

15. The system of claim 13, wherein the light source comprises a lighted liquid crystal panel.

16. The system of claim 13, further including a remote control device allowing the driver to set the apparent positions of the left and right driver-visible lines as reflected from the windshield while the driver is in a normal driving position, by adjusting the light source.

17. The system of claim 13, wherein the vehicle has a dashboard with an upper surface, and wherein the light source is mounted on the upper surface of the dashboard in such a way as not to be directly visible to the driver.

18. The system of claim 13, wherein the automatic means connected to the steering wheel includes a microprocessor receiving inputs regarding steering wheel position and controlling the orientation and shape of the light source in accordance with such inputs.

19. The system of claim 18, wherein the light source comprises an LED array connected to the microprocessor.

20. The system of claim 18, wherein the light source comprises a lighted liquid crystal panel.

21. A system assisting a driver of a large motor vehicle having a windshield behind which the driver sits and operates a steering wheel of the vehicle, the system comprising:

a light source near the vehicle windshield, in a position as not to be seen directly by the driver but such as to make a reflection of a pair of driver-visible light lines on the windshield, the lines being adjustable and converging toward one another at their upper ends as seen reflected on the windshield, the reflected left and right lines being located for a particular driver relative to the driver's head position while driving the vehicle, the left line being oriented to appear to the driver to be generally parallel to a left side lane line in a roadway where the vehicle is being driven in a straight path and where the path ahead of the vehicle is straight, and the right line being oriented to appear to be generally parallel to a right side lane line or right edge of the roadway on which the vehicle is being driven in a straight path, and

a separate remote control device allowing the driver to set the apparent positions of the left and right driver-visible lines as reflected from the windshield while the driver is in a normal driving position, by adjusting the light source,

whereby the driver drives the vehicle with the eyes of the driver focused and converged ahead at the roadway and not on the lines seen on the windshield, thereby producing in the peripheral vision of a two-eyed driver a double image of each of the left and right lines on the windshield, the double images comprising inner and outer left line images and inner and outer right line images and the inner left and right line images defining a conceptual zone of safety between them, and with the driver steering the vehicle so as to maintain the vehicle on a path wherein both the left side lane line and the right side lane line or roadway edge remain outside

the zone of safety, whereby when such a lane line enters the zone of safety, as seen by the driver, the driver takes this as a warning that corrective steering action is needed.